THE CHEMICAL ENGINEERING JOURNAL VOLUME 60, NOS. 1–3, DECEMBER 1995

Contents

Review

Computation and thermodynamic interpretation of high-pressure vapour–liquid equilibrium—a review 1
A.L. Mühlbauer, J.D. Raal (Natal, South Africa)

Regular Papers

Internal fouling of microporous cross-flow filtration membranes with dilute latex suspensions 31
R.G. Holdich, G.M. Zhang (Loughborough, UK)

Séchage de maïs en lit fluidisé à flottation. II: modélisation de la cinétique de séchage 39
M. Mourad, M. Hémati, C. Laguérie (Toulouse, France)

The deashed charcoal–oil–water mixture: a liquid fuel for biomass energetical valorization 49
A. N'kpomin, A. Boni (Abidjan, Ivory Coast), G. Antonini, O. François (Compiègne, France)

A theoretical study of transient cross-flow filtration using force balance analysis 55
W. Wang, X. Jia, G.A. Davies (Manchester, UK)

Studies on kinetics of forward and backward extraction of neodymium by using phosphonic acid monoester as an acidic extractant 63
K.R. Chitra, A.G. Gaikwad, G.D. Surender, A.D. Damodaran (Trivandrum, India)

Comparative study of tuyere designs for fluidized beds 75
Sh. Saberi, B. Saberi, K. Shakourzadeh, P. Guigon (Compiègne, France)

Adsorptive processes using "large-pore" materials: analysis of a criterion for equivalence of diffusion–convection, "apparent" diffusion and "extended" linear driving force models 81
A. Leitão, A. Rodrigues (Luanda, Angola)

High-pressure segregation of solids with a wide particle size distribution when fluidized with a gas 89
M. Ściążko (Zabrze, Poland), J. Bandrowski (Gliwice, Poland)

Salt effect parameter from tie line correlation constants 97
M. Govindarajan, Pl. Sabarathinam (Annamalainagar, India)

Rate of reaction of chlorine dioxide and hydrogen peroxide 101
M. Burke, M. Fazlul Hoq, W.R. Ernst (Atlanta, GA, USA)

Flow reactor models for fluid–fluid systems, based on the two-film theory 105
J. Wang (Beijing, China)

Catalytic processes using "large-pore" materials: effects of the flow rate and operating temperature on the conversion in a plug-flow reactor for irreversible first-order reactions 111
A. Leitão (Luanda, Angola), A. Rodrigues (Porto, Portugal)

Viscosity of triglyceride and alcohol solutions: application of the Krone, Doolittle and Macedo–Litovitz equations 117
M. Rodríguez, M. Galán (Puerto Real Cádiz, Spain)

Effect of polyhydroxyalcohols on COS absorption in aqueous methyldiethanolamine 123
J.N.J.J. Lammers, J. Haringa (Amsterdam, Netherlands), R.J. Littel (Enschede, Netherlands)

Mathematical modeling of a fluidized bed reactor taking into account unsteady state of the catalyst 131
S.I. Reshetnikov, B.S. Balzhinimaev, V.P. Gaevoi, A.A. Ivanov (Novosibirsk, Russia)

Flow of a viscous trickle on a slowly varying incline 141
B.R. Duffy (Glasgow, UK), H.K. Moffatt (Cambridge, UK)

Short Communications

Direct test of adsorption enthalpy in 1-butene isomerization over a silica–alumina catalyst 147
A. Santos, F. García-Ochoa (Madrid, Spain)

Effect of draft tube position on the hydrodynamics of a draft tube slurry bubble column 155
F.F. Pironti, V.R. Medina, R. Calvo, A.E. Sáez (Caracas, Venezuela)

Measurements of solids concentration in a three-phase reactor by an ultrasonic technique 161
Y. Soong, I.K. Gamwo, A.G. Blackwell, R.R. Schehl, M.F. Zarochak (Pittsburgh, PA, USA)

Effect of miscibility-to-extraction temperature ratio on selectivity, refining power and overall processing solvent index in solvent extraction 169
K.P. Singh (Jorhat Assam, India)

Book Reviews 173

BIOCHEMICAL ENGINEERING JOURNAL

Biosorption of heavy metals by *Zoogloea ramigera*: use of adsorption isotherms and a comparison of biosorption characteristics 181
Y. Sağ, T. Kutsal (Ankara, Turkey)

A mathematical model for solid state fermentation of mycelial fungi on inert support 189
G.-R. Mariano, A. Richard (México, DF, Mexico), B.J. Claude (Montpellier, France), R. Sergio (México, Mexico)

The investigation of transient multidimensional heat transfer in solid state fermentation 199
P. Sangsurasak, D.A. Mitchell (St. Lucia, Qld., Australia)

Author Index 205

Subject Index 207

0923-0467(199512)60:1/3;1-G